

Case 2902

***Acanthoteuthis* Wagner in Münster, 1839 and *Kelaeno* Münster, 1842 (Mollusca, Cephalopoda): proposed conservation of usage**

D.T. Donovan

*Department of Geological Sciences, University College London,
Gower Street, London WC1E 6BT, U.K.*

Abstract. The purpose of this application is to conserve the current usage of the names *Acanthoteuthis* Wagner in Münster, 1839 and *Kelaeno* Münster, 1842 for two genera of Jurassic teuthoid coleoids. In 1839 Münster had mentioned the name *Kelaeno* as synonymous with *Acanthoteuthis* but had not made it available. In 1841 d'Orbigny used the name *Kelaeno* in Münster's (1839) sense, but in 1842 Münster used the name for a different taxon which conforms with current usage. Suppression of *Kelaeno* d'Orbigny, 1841 is proposed.

1. The generic name *Acanthoteuthis* was proposed for certain fossils from the Upper Jurassic (Tithonian Stage) lithographic limestones (lithographischen Schiefern) of the Solnhofen area of Bavaria in a letter from Rudolf Wagner quoted by Georg Graf zu Münster (1839, p. 94). After describing the fossils Wagner wrote 'Was endlich den Namen betrifft, so könnte man die fossile Gattung vielleicht *Acanthopus*, oder, um gleich die Familie und die Verwandtschaft mit *Onychoteuthis* anzudeuten, *Acanthoteuthis* nennen.' (Lastly, as far as the name is concerned, one may perhaps call the fossil genus *Acanthopus*, or, so as to indicate the family and the relationship with *Onychoteuthis*, *Acanthoteuthis*). After quoting Wagner's letter Münster wrote: 'Ich finde den vorgeschlagenen Namen *Acanthoteuthis* passend und vertausche ihn gern mit dem früher vorgeschlagenen Namen *Kelaeno* (Harpie) ...'. (I find the proposed name *Acanthoteuthis* appropriate and exchange it willingly with the earlier proposed name *Kelaeno* (Harpy) ...). Notwithstanding the phrase 'dem früher vorgeschlagenen Namen' the name *Kelaeno* had not been previously published. Thus Münster's (1839) paper mentions three new names for the same genus: *Acanthopus*, *Acanthoteuthis* and *Kelaeno*. Of these Münster selected *Acanthoteuthis* as the available name. The other two names were not made available since they were not used as valid names. Wagner (in Münster, 1839) did not cite any species, but Münster in his accompanying text described and figured three species: *Acanthoteuthis speciosa* (p. 94, pl. 9), *A. Férussacii* (p. 95, pl. 10, fig. 1) and *A. Lichtensteinii* (p. 96, pl. 10, fig. 2). The first two specific names had been previously published as the nomina nuda *Onychoteuthis speciosa* and *O. Ferussacci* by Münster (1837, p. 252).

2. Münster had sent MS descriptions and figures of what he then called *Kelaeno speciosa* and other species to d'Orbigny, who (1841, p. 354) published the combinations *Kelaeno speciosa* (Münster, 1839) and *Kelaeno prisca* (Rüppell, 1829) in a list. Since *Kelaeno* had not been made available in Münster (1839), d'Orbigny's inclusion of two available specific names makes this the first valid publication of *Kelaeno*. D'Orbigny later (1843, p. 140, pl. 23, figs. 1-4) published a description and figures of

Kelaeno speciosa, to Münster's displeasure (1846, p. 54) because by then Münster had accepted *Acanthoteuthis* for this taxon and (1842a, p. 46) had used *Kelaeno* in a different sense for a new genus of cephalopod from the lithographischen Schiefer, giving a diagnosis but citing no species. Later the same year Münster (1842b) described and figured two species, *Kelaeno scutellaris* (p. 96, pl. 1, fig. 1) and *Kelaeno arcuata* (p. 96, pl. 1, fig. 2). In the same paper Münster (p. 97) described a species of *Acanthoteuthis*. It is clear from this and from the descriptions and figures that Münster was not using *Kelaeno* for the same taxon as *Acanthoteuthis* but for a different and new genus. Quenstedt (1849, p. 522) noted that Münster had used *Kelaeno* in two different senses, and adopted the sense of Münster (1842).

3. Owen (1844, p. 81) referred to d'Orbigny (1843) and used the spelling *Celaeno*, but did not explain the change of spelling from *Kelaeno* to *Celaeno*. A.J. Wagner (1860, p. 779) likewise used the spelling *Celaeno* and explained that this was a correction to the latinization of 'Kelaeno', a mythical Greek 'Harpy'. Fischer (1882, p. 354) also used the spelling *Celaeno*, with *Kelaeno* as a synonym, but in the sense of Münster (1842). The form *Celaeno* had been used before 1844 for different taxa by at least three different authors: Rafinesque-Schmalz (1815), Leach (1821) and Koch (1835). *Celaeno* Owen is an unjustified emendation and a junior homonym and cannot be used as a valid name.

4. In his *Manual of the Mollusca*, Woodward (1851, p. 75) adopted *Acanthoteuthis*, with *Kelaeno* (sensu Münster, 1839) as a synonym. Schenk (1884, pp. 519, 521) in Zittel's *Handbuch der Palaeontologie* adopted both *Acanthoteuthis* and *Kelaeno* (sensu Münster, 1842).

5. Bülow-Trummer (1920, p. 268) designated *Acanthoteuthis speciosa* Münster, 1839 as the type species of *Acanthoteuthis*. Bülow-Trummer also (1920, p. 266) listed *Celaeno* Münster, 1842 with the type species *Celaeno arcuata* Münster; this is accepted as a type species designation for *Kelaeno* of *Kelaeno arcuata* Münster, 1842, which Bülow-Trummer spelt as *arcuata* in his synonymy.

6. Naef, an authority on both living and fossil Coleoidea, in two works published in 1921 accepted *Kelaeno* Münster, 1842 and proposed a family KELAENIDAE, indicating this as nom. nov. in both papers (1921a, p. 535; 1921b, p. 47). Naef (1921a) was published on 31 March 1921; Naef (1921b) is not dated and is presumed to have been published later since in his bibliography Naef (1922) placed it after Naef (1921a). It follows that KELAENIDAE was established in Naef (1921a). In a comprehensive work on fossil Coleoidea, extensively cited by later authors, Naef (1922, p. 150) spelt the names *Celaeno* and CELAENIDAE without explaining the change of spelling.

7. Schevill (1950) regarded *Kelaeno* Münster, 1842 as preoccupied by *Kelaeno* Münster, 1839 and therefore unavailable. He proposed as a substitute *Münsterella* with the type species *Kelaeno scutellaris* Münster, 1842. This name is to be corrected to *Muensterella* under Article 32d(i)2 of the Code.

8. Roger (1952, p. 742) in a treatise on invertebrate palaeontology adopted *Münsterella* in place of *Kelaeno* and the family-group name MÜNSTERELLIDAE in place of KELAENIDAE Naef, 1921. He was followed in this generic usage in a Russian treatise (Krimholz, 1958, p. 171) which cited *Kalaeno* [sic — a lapsus calami] Münster, 1842 as a synonym, but retained the family group name CELAENIDAE Naef, 1921 with MÜNSTERELLIDAE Roger, 1952 as a synonym.

9. Jeletzky, an authority on fossil Coleoidea, in a preliminary study for the *Treatise on Invertebrate Paleontology*, included *Acanthoteuthis* as a valid genus (1966, p. 138) and listed the following (1966, p. 45) without comment: 'Kelaenidae Jeletzky, herein [nom. subst. pro Celaenidae Naef, 1921 (invalid family-group name based on nom. van., Code, Art. 11e)], containing *Kelaeno* Münster, 1842 (non Münster, 1839) [= *Celaeno* Naef, 1921; *Muensterella* Schevill, 1950 (ICZN pend.)]'. Jeletzky wrongly cited Naef's 1921 paper as using the incorrect spellings CELAENIDAE and *Celaeno*. Jeletzky did not submit an application to the Commission to determine the matter, and accordingly Engeser (1988) accepted *Kelaeno* d'Orbigny, 1841 as valid and employed *Muensterella* and MÜNSTERELLIDAE to replace *Kelaeno* Münster, 1842 and KELAENIDAE Naef, 1921.

10. *Acanthoteuthis* Wagner, 1839 has been widely used and always in the original sense. However, this name is at risk from the minority of workers who have considered that *Kelaeno* Münster, 1839 (or the unjustified emendation *Celaeno*) is the correct name for this taxon. *Acanthopus* has been generally ignored although Münster (1846, p. 59) proposed its use as a subgenus of *Acanthoteuthis*. Naef (1922, p. 115, footnote) noted *Acanthopus* but did not use it in his main text. The name had been used prior to 1839 by Klug (1807), Dahl (1823), Latreille (1829) and de Haan (1835) and was placed on the Official Index as a junior homonym in Direction 37 (1956).

11. There is confusion with *Kelaeno* because of the ambiguous nature of Münster's (1839) use of this name and its publication by d'Orbigny (1841) which had been overlooked by most authors. It was generally used by 19th century German palaeontologists with the meaning of Münster (1842), e.g. (as *Celaeno*) by A.J. Wagner (1860, p. 779) in a critical review of the Coleoidea of the lithographischen Schiefer. A few authors have regarded it as preoccupied by *Kelaeno* Münster, 1839, and three (Roger, 1952; Krimholz, 1958; Engeser, 1988) to my knowledge have employed the substitute name *Muensterella*. It is important to stabilise usage of the names *Acanthoteuthis* Wagner, 1839 and *Kelaeno* Münster, 1842 in their generally accepted usage.

12. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary powers to suppress the generic name *Kelaeno* d'Orbigny, 1841, and all uses of the name *Kelaeno* prior to the publication of *Kelaeno* Münster, 1842, for the purposes of both the Principle of Priority and the Principle of Homonymy;
- (2) to place on the Official List of Generic Names in Zoology the following names:
 - (a) *Acanthoteuthis* Wagner in Münster, 1839 (gender: feminine), type species by subsequent designation by Bülow-Trummer (1920) *Acanthoteuthis speciosa* Münster, 1839;
 - (b) *Kelaeno* Münster, 1842 (gender: feminine), type species by subsequent designation by Bülow-Trummer (1920) *Kelaeno arquata* Münster, 1842;
- (3) to place on the Official List of Specific Names in Zoology the following names:
 - (a) *speciosa* Münster, 1839, as published in the binomen *Acanthoteuthis speciosa* (specific name of the type species of *Acanthoteuthis* Wagner in Münster, 1839);
 - (b) *arquata* Münster, 1842, as published in the binomen *Kelaeno arquata* (specific name of the type species of *Kelaeno* Münster, 1842);

- (4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:
- (a) *Kelaeno* Münster, 1839 (nomen nudum);
 - (b) *Kelaeno* d'Orbigny, 1841, as suppressed in (1) above;
 - (c) *Celaeno* Owen, 1844 (incorrect subsequent spelling of *Kelaeno* Münster, 1842);
 - (d) *Kalaeno* Krimholz, 1958 (incorrect subsequent spelling of *Kelaeno* Münster, 1842).

References

- Bülow-Trummer, E. von. 1920. Cephalopoda dibranchiata. *Fossilium Catalogus, 1: Animalia*, part 11. 313 pp. Junk, Berlin.
- Engeser, T. 1988. Vampyromorpha ('Fossile Teuthiden'). *Fossilium Catalogus, 1: Animalia*, part 130. 167 pp. Kugler, Amsterdam.
- Fischer, P. 1882. *Manuel de conchyliologie et de paléontologie conchyliologique ou histoire naturelle des mollusques vivants et fossiles*, part 4. Pp. 305–416. Savy, Paris.
- Jeletzky, J.A. 1966. Comparative morphology, phylogeny, and classification of fossil Coleoidea. *University of Kansas Paleontological Contributions*, Mollusca Article 7: 1–162.
- Krimholz, G.Y. 1958. Pp. 145–178 in Luppov, N.P. & Drushchitz, V.V. (Eds.), *Endocochlia in Osnovy Paleontologii: Molluscs — II*. Moscow.
- Münster, G. Graf zu. 1837. Neue Gattungen und Arten fossiler Körper. P. 252 in Mineralogische Vorträge bei der Versammlung Deutscher Naturforscher und Ärzte in Jena im Sept. 1836. *Neues Jahrbuch für Mineralogie, Geognosie, Geologie und Petrefakten-Kunde*, 1837: 244–252.
- Münster, G. Graf zu. 1839. *Acanthoteuthis*, ein neues Geschlecht der Cephalopoden, zu der Familie der Loligineen oder Teuthidae (Owen) gehörend. Pp. 91–97 in Münster, G. Graf zu (Ed.), *Beiträge zur Petrefakten-Kunde*, part 1. Bayreuth.
- Münster, G. Graf zu. 1842a. Beitrag zur Kenntniss einiger neuen seltenen Versteinerungen aus den lithographischen Schiefern in Baiern. *Neues Jahrbuch für Mineralogie, Geognosie, Geologie und Petrefakten-Kunde*, 1842: 35–46.
- Münster, G. Graf zu. 1842b. Ueber einige neue fossile schalenlose Cephalopoden und eine neue Gattung Ringelwürmer (Anneliden). Pp. 95–99 in Münster, G. Graf zu (Ed.), *Beiträge zur Petrefakten-Kunde*, part 5. Bayreuth.
- Münster, G. Graf zu. 1846. Ueber die schalenlosen Cephalopoden des oberen Juragebirgs, der lithographischen Kalkschiefer in Bayern. Pp. 51–66 in Dunker, W. (Ed.), *Beiträge zur Petrefakten-Kunde*, part 7. Bayreuth.
- Naef, A. 1921a. Das System der dibranchiaten Cephalopoden und die mediterranen Arten derselben. *Mitteilungen aus der Zoologischen Station zu Neapel*, 22: 527–542.
- Naef, A. 1921b. *Die Cephalopoden. 35 Monographie der Fauna und Flora des Golfes von Neapel und der angrenzenden Meeres-Abschnitte*, part 1. 147 pp. Friedländer, Berlin.
- Naef, A. 1922. *Die fossilen Tintenfische*. vii, 322 pp. Fischer, Jena.
- Orbigny, A. d'. 1841. Considérations paléontologiques et géographiques sur la distribution des céphalopodes acétabulifères. *Bulletin de la Société Géologique de France*, 12: 352–364.
- Orbigny, A. d'. 1843. *Paléontologie française. Description zoologique et géologique de tous les animaux mollusques et rayonnés fossiles de France, comprenant leur application à la reconnaissance des couches. Terrains oolitiques ou jurassiques. Tome premier, comprenant les céphalopodes*, parts 6–11. Pp. 81–144, pls. 6–44. Author, Paris.
- Owen, R. 1844. A description of certain belemnites, preserved, with a great portion of their soft parts, in the Oxford Clay, at Christian-Malford, Wilts. *Philosophical Transactions of the Royal Society*, 1844: 65–83.
- Quenstedt, F.A. 1849. Pp. 473–580, pls. 31–36 in: *Petrefaktenkunde Deutschlands. 1. Die Cephalopoden*, part 6. Fues, Tübingen.
- Roger, J. 1952. Sous-classe des Dibranchiata Owen 1836. Pp. 689–755 in Piveteau, J. (Ed.), *Traité de Paléontologie*, vol. 2. Masson, Paris.

- Schenk, A. 1884. Pp. 329–522 in Zittel, K.A. (Ed.), *Handbuch der Palaeontologie*, vol. 1, part 3 (Palaeozoologie) 2 (Mollusca und Arthropoda). Oldenbourg, München & Leipzig.
- Schevill, W.E. 1950. *Münsterella*, a new name for *Kelaeno* Münster 1842, non Münster 1839. *Journal of Paleontology*, **24**: 117–118.
- Wagner, A.[J.] 1860. Die fossilen Ueberreste von nackten Dintenfischen aus dem lithographischen Schiefer und dem Lias des süddeutschen Juragebirges. Kritisch erläutert. *Abhandlungen der Mathemat.-Physikalischen Classe der königlich bayerischen Akademie der Wissenschaften*, **8**(3): 751–821.
- Woodward, S.P. 1851. *A manual of the Mollusca; or, rudimentary treatise of Recent and fossil shells*, part 1. viii, 158 pp., 12 pls. Weale, London.